

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Masahide MIURA

Attn: PCT Branch

Application No. New U.S. Patent Application

Filed: August 15, 2006

Docket No.: 129097

For: EXHAUST GAS PURIFYING CATALYST AND PRODUCTION PROCESS
THEREOF

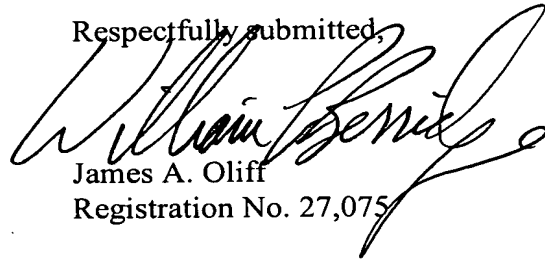
**TRANSMITTAL OF THE ANNEXES TO THE
INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached hereto are the annexes to the International Preliminary Report on Patentability (Form PCT/IPEA/409). The attached material replaces the claims in their entirety starting on page 17 and ending on page 18.

Respectfully submitted,



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CLAIMS

1. An exhaust gas purifying catalyst comprising a metal oxide particle and rhodium supported thereon,

wherein said metal oxide particle comprises a core part and a surface layer, the molar fraction of the cerium constituting the ceria in the core part being higher than the molar fraction of the cerium constituting the ceria in the surface layer, and the molar fraction of the zirconium constituting the zirconia in the surface layer being higher than the molar fraction of the zirconium constituting the zirconia in the core part; and

wherein said core part and said surface layer each comprises a plurality of primary particles.

2. The exhaust gas purifying catalyst according to claim 1, wherein the molar fraction of cerium is from 35 to 50 mol% based on the total molar number of cerium and zirconium in said metal oxide particle.

3. The exhaust gas purifying catalyst according to claim 1 or 2, wherein the total molar fraction of cerium and zirconium is at least 85 mol% based on the total molar number of metals in said metal oxide particle.

4. The exhaust gas purifying catalyst according to any one of claims 1 to 3, wherein said metal oxide particle has an average particle diameter of less than 10 μm .

5. The exhaust gas purifying catalyst according to any one of claims 1 to 4, wherein at least one element selected from the group consisting of alkaline earth metals and rare earths is added to said core part relatively rich in ceria.

6. The exhaust gas purifying catalyst according to any one of claims 1 to 5, wherein at least one element selected from the group consisting of alkaline earth metals and rare earths is added to said surface layer relatively rich in zirconia.

7. A process for producing an exhaust gas purifying catalyst, comprising:
providing a sol containing at least a population of ceria colloid particles and a population of zirconia colloid particles differing in the isoelectric point with each other, the difference between the isoelectric points being at least 3,
adjusting the pH of said sol to be closer to the isoelectric point of said population of ceria colloid particles than to the isoelectric point of said population of zirconia colloid particles, thereby aggregating said population of ceria colloid particles,
adjusting the pH of said sol to be closer to the isoelectric point of said population of zirconia colloid particles than to the isoelectric point of said population of ceria colloid particles, thereby aggregating said population of zirconia colloid particles onto said aggregated population of ceria colloid particles,
drying and firing the obtained aggregate to obtain a metal oxide particle comprising a core part relatively rich in ceria and a surface layer relatively rich in zirconia, and
loading rhodium on the obtained metal oxide particle.